

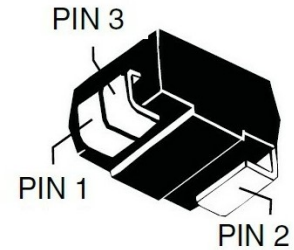


# WEOS4-100/400AS-3

## Thyristor Surge Protector

### Features

- Bi-directional crowbar transient voltage protection
- High surge capability
- High off-state impedance, Low leakage current
- Short-circuit failure mode
- Low on-state voltage



### Main Application

- Data lines and security systems.
- CATV line amplifiers and power inserters.
- Sprinkler systems.

### Absolute Maximum Ratings (TA =25°C)

Parameter	Symbol	Value	Unit
Non-repetitive peak impulse current 10/1000 $\mu$ s (Telcordia GR-1089-CORE)	$I_{PPSM}$	100	A
Non-repetitive peak impulse Voltage 10/700 $\mu$ s (ITU-T K.20, K.21 & K.44, K.45)	$V_{PPSM}$	6000	V

### Electrical Parameters (TA =25°C)

Part Number	$V_{DRM}$	$I_{DRM}$	$V_{BO}$	$I_{BO}$	$V_T$	$I_T$	$C_o$	$I_H$
	Max.	Max.	Max.	Max.	Max.	Max.	Typ.	Typ.
	V(PIN 1,3-2)	$\mu$ A	V(PIN 1,3-2)	mA	V	A	pF	mA
<b>WEOS4-100/400AS-3</b>	400	5	520	800	4	2.2	35	40

**$V_{DRM}$ :** Stand-off voltage, is measured at  $I_{DRM}$ .

**$I_{DRM}$ :** Leakage current at  $V_{DRM}$ .

**$V_{BO}$ :** Breakover voltage, is measured at 100V/ $\mu$ s.

**$I_{BO}$ :** Breakover current.

**$V_T$ :** On-state voltage.

**$I_T$ :** On-state current.

**$C_o$ :** Off-state capacitance.

**$I_H$ :** Holding current.

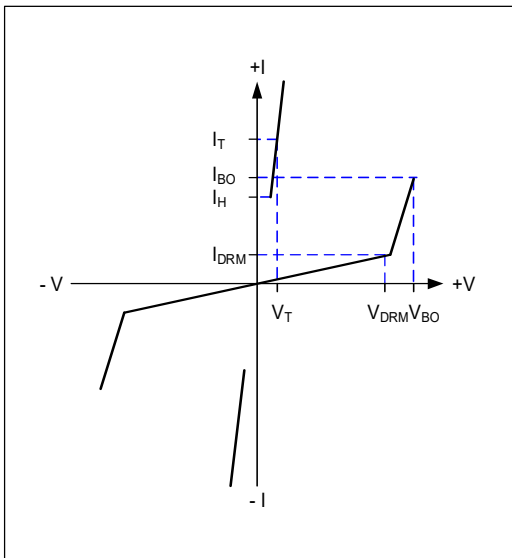
**$I_{PP}$ :** Peak pulse current, is a repetitive surge rating and is guaranteed for the life of the product.

**$V_{ppsm}$ :** Peak pulse voltage, is a repetitive surge rating and is guaranteed for the life of the product.

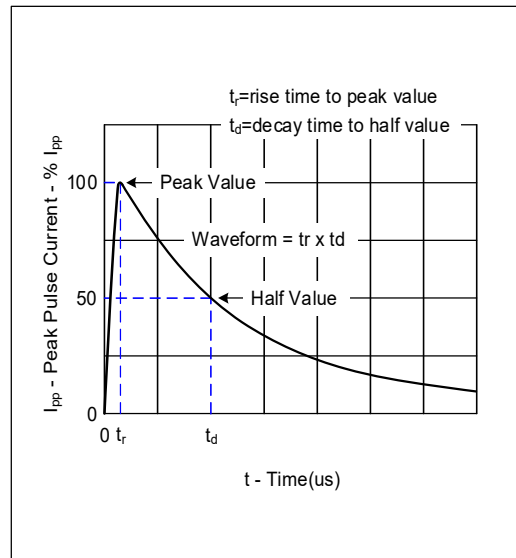
**General Notes:**

- All measurements are made at an ambient temperature of 25 °C.  $I_{PP}$  applies to -40 °C through +85 °C temperature range.
- WEOS4 devices are bi-directional. All electrical parameters and surge ratings apply to forward and reverse polarities.
- Special voltage ( $V_{BO}$  and  $V_{DRM}$ ) and holding current ( $I_H$ ) requirements are available up on request. Off-state capacitance is measured at 1 MHz with a 2 V bias.

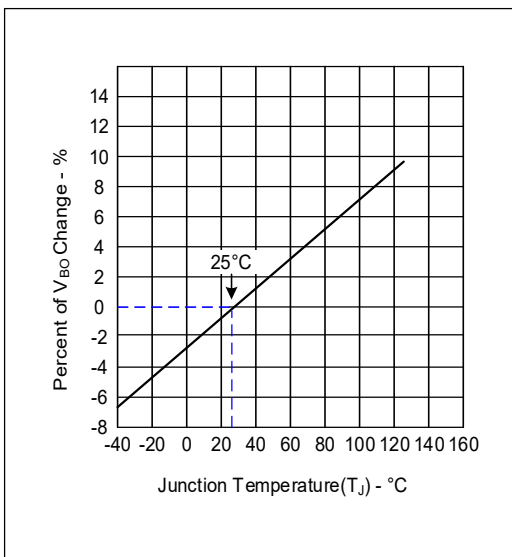
**Electrical Characteristics Curves**



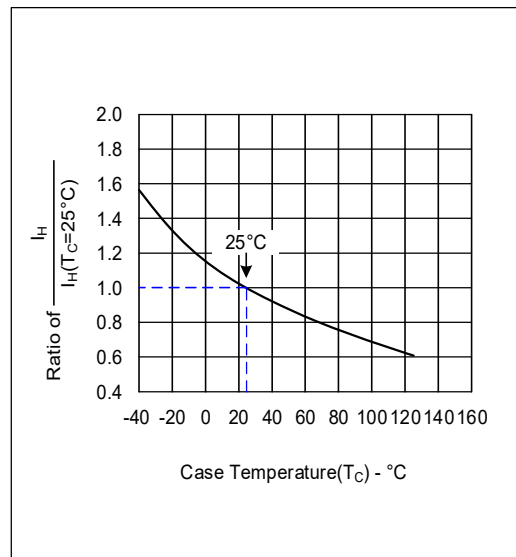
V - I Characteristics



$t_r \times t_d$  Pulse Waveform



Normalized  $V_{BO}$  Change versus Junction Temperature



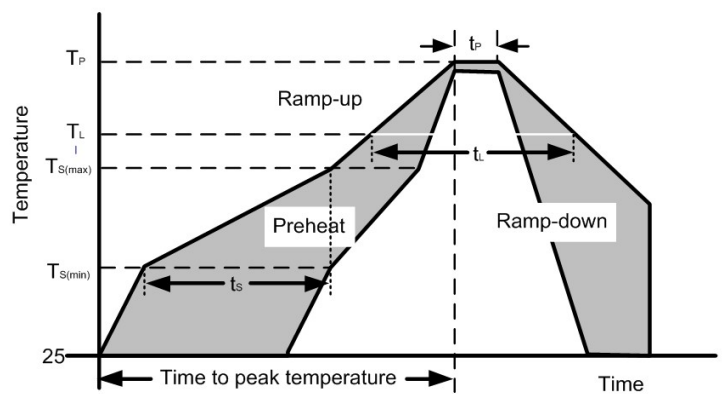
Normalized DC Holding Current versus Case Temperature

### Thermal Resistances

Symbol	Parameter	Value	Unit
T <sub>s</sub>	Storage temperature range	-55 to +150	°C
T <sub>j</sub>	Junction temperature range	-40 to +125	°C

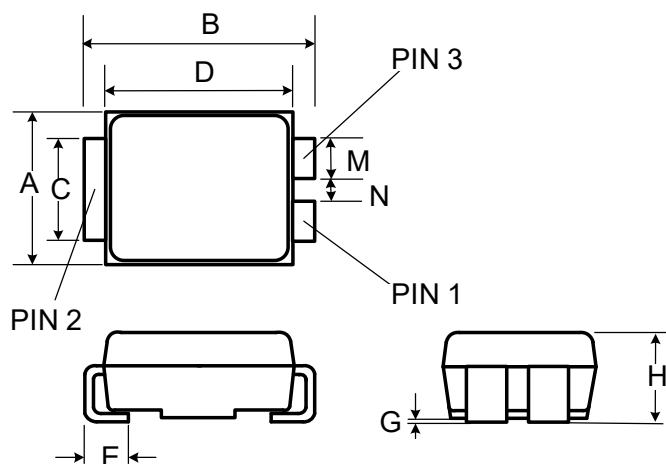
### Soldering Parameters

Reflow Condition		
Pre Heat	Temperature Min (T <sub>s(min)</sub> )	150°C
	Temperature Max (T <sub>s(max)</sub> )	200°C
	Time (min to max) (t <sub>s</sub> )	60-190 s
Average ramp up rate (Liquidus Temp) (T <sub>L</sub> ) to peak		3°C/s max
T <sub>s(max)</sub> to T <sub>L</sub> - Ramp-up Rate		3°C/s max
Reflow	Temperature (T <sub>L</sub> ) (Liquidus)	217°C
	Temperature (t <sub>L</sub> )	60-150 s
Peak Temperature (T <sub>P</sub> )		260 <sup>+0/-5</sup> °C
Time within actual peak Temperature (t <sub>p</sub> )		20-40 s
Ramp-down Rate		5°C/s max
Time 25°C to peak Temperature (T <sub>P</sub> )		8 minutes Max.
Do not exceed		260°C

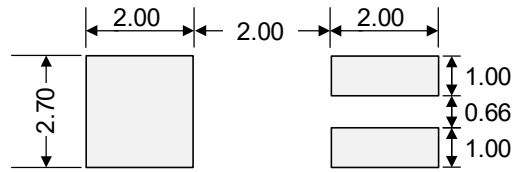


### Product Dimensions

Ref. (mm)	Millimeters	
	Min.	Max.
A	3.30	3.94
B	5.21	5.59
C	1.90	2.20
D	4.10	4.75
E	0.76	1.52
G	0.05	0.30
H	1.95	2.65
M	0.50	0.75
N	0.50	0.85

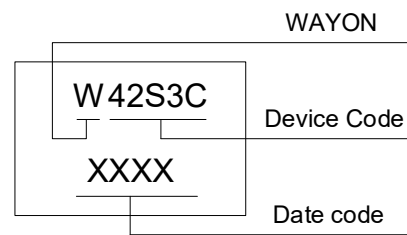
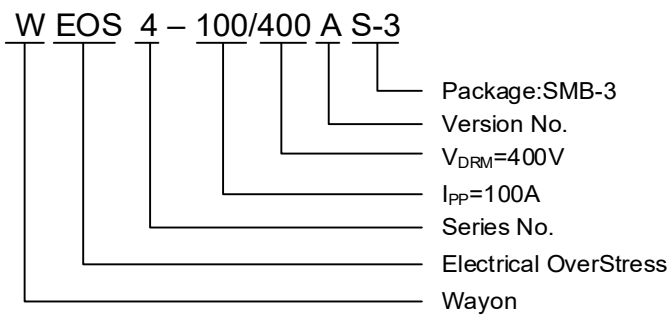


### Recommended Solder Pad Layout



Dimensions in mm

### Part Numbering System and Marking



### Package Information

Package Type	Description	Quantity (pcs)
SMB-3	Tape & Reel Pack	2500

### Contact Information

No.1001, Shiwan(7) Road, Pudong District, Shanghai, P.R.China.201207  
 Tel: 021-68969993 Fax: 86-21-50757680 Email: market@way-on.com  
 WAYON website: <http://www.way-on.com>

For additional information, please contact your local Sales Representative.

**WAYON**® is registered trademarks of Wayon Corporation.

*Specifications are subject to change without notice.  
 The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.  
 Users should verify actual device performance in their specific applications.*

单击下面可查看定价，库存，交付和生命周期等信息

[>>WAY-ON\(维安\)](#)